WHAT IS THE NASOPHARYNX?

The pharynx is the medical term for the throat. It has three parts:

- nasopharynx (upper throat)
- oropharynx (mid throat, including the tonsils)
- hypopharynx (lower throat).

This diagram shows parts of the nasopharynx and the surrounding regions.

WHAT DOES THE NASOPHARYNX DO?

The nasopharynx connects the nose (nasal) cavity to the space behind the mouth (the oropharynx).

The nasopharynx allows air breathed into the nose to go down through the voice box (larynx) and into the lungs. It also allows phlegm (mucus) from the nose to be swallowed or spat out.
WHAT IS NASOPHARYNGEAL CANCER

Cancer that starts anywhere in the nasopharynx is called nasopharyngeal cancer.

Cancer occurs when cells become abnormal, grow uncontrollably and have the potential to spread to other parts of the body. These cells build up to form a mass (or lump). Cancer that starts in or behind the nose is called nasopharyngeal cancer.

WHAT CAUSES NASOPHARYNGEAL CANCER

Doctors often can’t explain why a person gets cancer. But we do know what makes some cancers more likely. The main causes of nasopharyngeal cancer are:

- viruses, in particular the Epstein–Barr virus (EBV)
- smoking (cigarettes, cigars or pipes) or using ‘smokeless’ tobacco (snuff and chewing tobacco). If a person smokes or has smoked in the past they have a higher risk of getting nasopharyngeal cancer than someone who has never smoked.

Other factors that increase the risk of getting nasopharyngeal cancer are:

- being from southern China or South East Asia - people from Southern China and South East Asia seem to have higher risk.
- age – most nasopharyngeal cancers are in people aged 40 years and over
- being male – in Australia, men are about three times more likely than women to get nasopharyngeal cancer
- eating a lot of salt-cured fish and meat.
WHAT ARE THE SIGNS AND SYMPTOMS OF NASOPHARYNGEAL CANCER?

The signs and symptoms of nasopharyngeal cancer depend on the where the cancer is, its size and how far it has spread in the body.

Common signs and symptoms include:

- nasal obstruction or stuffiness
- frequent nose bleeds
- blocked ear, decreased hearing or ringing in the ear (especially on one side only)
- a lump in the neck
- frequent headaches
- numbness in the face
- blurred or double vision.

Most often these symptoms are not from nasopharyngeal cancer. However, if you have any of these symptoms for more than a few weeks, talk to your doctor as early as possible. They may be able to help diagnose and treat you.

HOW IS NASOPHARYNGEAL CANCER DIAGNOSED?

It is important that your doctor establishes the diagnosis of nasopharyngeal cancer, assesses the size of the cancer and whether it has spread to the lymph nodes in the neck or elsewhere in the body.

To answer these questions, your doctor will need to do the following things:

- ask about your medical history including signs you may have noticed, any other health conditions, medications that you are taking, and whether you smoke or drink alcohol
- perform a physical examination by feeling and looking inside your throat and neck
- order diagnostic tests, which may include scans.

Not everyone will need to have every test for nasopharyngeal cancer. Your doctor will recommend the tests that are right for you. Common tests include:

- **Nasoendoscopy**: Your doctor will look inside your nose and throat using a very thin flexible tube with a tiny light and camera on it (called an endoscope). This can be done in an office or clinic.
• **Biopsy**: This involves taking a piece of tissue (sample) either from the throat or from a lymph node in the neck, if it appears to be involved by the cancer. A pathologist then looks at the sample under a microscope to check for cancer cells. This is often the only sure way to tell if you have cancer. If the suspicious area can be safely accessed through the mouth, your doctor may take a sample for biopsy in the office. However, this is often not possible because the cancer may be too far back and some patients need to be asleep under a general anaesthetic for the biopsy. This is usually done as a day procedure.

Your doctor may order one of two types of biopsies of the lymph nodes in your neck. Both are usually done using an ultrasound scan to make sure the needle is in the right spot.

  • **Fine Needle Aspiration or FNA** is used when there is a lump (enlarged lymph node) in the neck that could have cancer cells in it. During the procedure, your doctor will take some cells from the lump using a needle. It may feel a bit uncomfortable during the biopsy.

  • **Core biopsy** uses a bigger needle to get more cells for the biopsy. This is more uncomfortable than needle biopsy so doctors only use this if it is really needed.

• **CT (Computed Tomography) scan**: This uses X-rays to take pictures of the inside of the body. If a person has cancer, a CT scan can help the doctor to see where it is, measure how big it is, and if it has spread into nearby organs or other parts of the body.

• **MRI (Magnetic Resonance Imaging) scan**: This uses magnetic fields to take pictures of the inside of the body. This helps your doctor see how far a cancer has grown into the tissue around it.

• **PET (Positron Emission Tomography) scan**: This is a whole body scan that uses a radioactive form of sugar which can show if nasopharyngeal cancer has spread to the lymph nodes or elsewhere in the body.
THE CANCER CARE TEAM

After a diagnosis of cancer has been made, your doctor is likely to talk about your diagnosis with the cancer care team they work with. This is known as a head and neck cancer MDT (multidisciplinary team). You may be asked to attend an appointment where the MDT talks about how best to treat your cancer, and coordinate your treatment and care. This team includes experts who will review the diagnosis and tests performed and consider all parts of your treatment and recovery. The purpose of the MDT is to decide on the best treatment for your cancer and to help you regain the best function possible in the long-term.

<table>
<thead>
<tr>
<th>Healthcare professionals that are a part of your head and neck cancer MDT</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head and neck surgeons</td>
<td>specialist doctors who remove cancers in the face, mouth, throat and neck. This includes surgeons with a background in otolaryngology (Ear, Nose and Throat), general surgery, maxillofacial surgery, and reconstructive surgery. If surgery is required, the head and neck surgeon will carry out the procedure.</td>
</tr>
<tr>
<td>Reconstructive (plastic) surgeons</td>
<td>specialist doctors with expertise in reconstructing the head and neck. Some head and neck surgeons also do reconstructive surgery, depending on their training and experience.</td>
</tr>
<tr>
<td>Radiation oncologists</td>
<td>specialist doctors trained in the use of carefully directed radiation to treat cancer.</td>
</tr>
<tr>
<td>Radiation therapists</td>
<td>healthcare professionals who deliver the radiation treatment prescribed by the radiation oncologist.</td>
</tr>
<tr>
<td>Medical oncologists</td>
<td>specialist doctors who are experts in the use of medicines like chemotherapy to treat cancer.</td>
</tr>
<tr>
<td>Speech pathologists</td>
<td>healthcare professionals who work with people who have difficulties speaking or swallowing.</td>
</tr>
<tr>
<td>Dietitians</td>
<td>healthcare professionals who give food and dietary advice.</td>
</tr>
<tr>
<td>Dentist/oral medicine specialists</td>
<td>healthcare professionals who care for the mouth and teeth. Mouth care is very important in head and neck cancer, especially if radiation therapy is needed.</td>
</tr>
<tr>
<td>Pathologists</td>
<td>specialist doctors who are experts in looking at cells under a microscope and determining if they are cancer.</td>
</tr>
<tr>
<td>Radiology and nuclear medicine specialists</td>
<td>specialist doctors who interpret scans such as CT, MRI and PET scans.</td>
</tr>
<tr>
<td>Palliative care team</td>
<td>specialist doctors and nurses who have expertise in managing symptoms and improving quality of life, often in patients where the cancer can’t be cured.</td>
</tr>
<tr>
<td>Nurses</td>
<td>healthcare professionals who are experts in the care of people with cancer, and work with all members of the cancer care team. Often, specialist cancer nurses are part of the MDT. They will help to plan and coordinate your care.</td>
</tr>
<tr>
<td>Psychologists</td>
<td>are healthcare professionals who assist people with worries about coping and living with cancer (mental health).</td>
</tr>
<tr>
<td>Social workers</td>
<td>are healthcare professionals who provide practical and emotional support to people living with cancer.</td>
</tr>
</tbody>
</table>
WHAT IS STAGING?

Once your doctor has made a diagnosis of cancer, it is important that they assess the extent (or stage) of the cancer. Staging a cancer is important because it helps doctors to choose the best treatment for you. It also gives information about the chances of cure. The stage is based on the size of the cancer, whether it has invaded into nearby areas of the body and whether it has spread to lymph nodes in the neck (called lymph nodal metastases) or other sites in the body, such as the lungs, liver or bone (called distant metastases).

The TNM (Tumour, Node, Metastases) system is used to stage cancer. This system is used to summarise information about the size of the cancer and whether it has spread to lymph nodes at other parts of the body.

The TNM system

- **T** stands for the size and extent of the primary cancer in the nasopharynx. A T value can range from 1 (small cancer) to 4 (large cancer).
- **N** indicates whether the cancer has spread to the lymph nodes. Where there is no cancer in the lymph nodes, the N value is 0. An N value can range from 1 to 3, depending on the size and number of cancerous lymph nodes.
- **M** stands for distant metastases, or whether the cancer has spread to other parts of the body outside the head and neck. An M value can be either 0 (cancer has not spread to other parts of the body) or 1 (cancer has spread to other parts of the body).

Once the values for T, N and M have been worked out, they are combined to give an overall score between 1 and 4. Your doctor may write this in Roman numerals: I, II, III and IV.

Staging is complicated but in broad terms cancers may be described as:

- **Early stage cancer (Stage I or II cancers)** which are confined to the nasopharynx and nearby structures. There may be spread into nearby lymph nodes.
- **Advanced stage cancer (Stage III or IV cancers)** which are more advanced due to their invasion into nearby structures; spread to lymph nodes in the lower neck or both sides of the neck; or spread to other parts of the body.

The chance of cure depends on both the type of cancer and the stage. It is important to know that most patients with advanced nasopharyngeal cancer (even stage IV) can be cured.
TREATMENT OPTIONS FOR NASOPHARYNGEAL CANCER

Following a diagnosis of nasopharyngeal cancer, your MDT will discuss the treatment options that are suitable for you, including the possibility of participating in a clinical trial that is suitable for you. This is also a good time to consider if you would like a second opinion.

The most appropriate treatment for nasopharyngeal cancer depends on many factors. These include:

- size and location of the cancer
- whether the cancer has spread
- personal factors (e.g. age, general health and treatment history)
- treatments available (and whether any clinical trials are available)
- your preferences for treatment.

There are three types of treatment available for nasopharyngeal cancer. These include:

- Radiation therapy
- Chemotherapy
- Surgery

Radiation therapy uses high-energy waves to destroy or damage cancer cells and is the main treatment for nasopharyngeal cancer. Radiation therapy can be used alone for early-stage cancers. Chemotherapy is given during radiation therapy (concurrent chemoradiation) for advanced stage cancers to help the radiation therapy work better.

Chemotherapy uses medicines to destroy or damage cancer cells. It may be given before chemoradiation (neoadjuvant chemotherapy) or after chemoradiation (adjuvant chemotherapy).

Surgery is sometimes used for cancers that are still there after chemoradiation. Surgery is used to remove lymph nodes (neck dissection) that have cancer cells after radiation treatment or to treat cancer in the nasopharynx that has come back after treatment with chemoradiation.
RADIATION THERAPY

The most common radiation therapy treatment for nasopharyngeal cancer is called external beam radiation. This type of radiation therapy applies radiation from outside the body.

- **Definitive radiation therapy:** is the main treatment for nasopharyngeal cancer. It is used without surgery to cure nasopharyngeal cancer. Typically, radiation therapy is delivered daily (but not on weekends) over 7 weeks. Sometimes chemotherapy is added to radiation therapy (chemoradiation) to make it more effective.

- **Palliative radiation therapy:** in cases where a cure is not possible, radiation therapy is used to relieve symptoms of advanced nasopharyngeal cancer. Symptoms that may require palliative radiation therapy include pain, bleeding and pressure symptoms from the cancer pressing on vital structures (e.g. visual disturbance and headaches).

Radiation therapy may be given using:

- **Intensity Modulated radiation Therapy (IMRT) or Volumetric Arc Therapy (VMAT) or Tomotherapy,** which use different ways to deliver radiation very precisely, minimising the radiation that gets to healthy parts of the body surrounding the cancer.

- **Stereotactic radiation therapy,** which delivers a large and precise dose of radiation in one or a few visits. It can be used as part of radiation therapy to increase the dose of radiation to the nasopharynx cancer. It is sometimes used to treat cancer that has come back.

HOW DO I PREPARE FOR RADIATION THERAPY?

You will meet with many members of the cancer care team, who will help you learn how to look after yourself through radiation therapy, recovery and long-term follow-up. They will also talk to you about side effects and how to manage them. It may be helpful to write down questions as they come up, so you can ask anyone in your cancer care team when you see them.

- **Mask-making and simulation:** Radiation therapy is a precise treatment. In order to make sure, that the cancer is covered by the treatment, you will need to very still during the treatment, usually for about five minutes. A radiation therapy mask that is made to fit perfectly to your shape, will be put on you during each treatment to help the machine target where the cancer is.

  - You will have a planning CT scan (and sometimes other scans) with the mask on. Your radiation oncologist and radiation therapist will use these scans with all your other clinical information to develop a radiation therapy plan just for you (a personalised plan). Your plan will be checked by the radiation therapy and radiation oncology physics team, before it is ready to be used for your treatment. This whole process can take approximately 2-3 weeks.
• **Teeth and mouth care:** If you are having radiation therapy for advanced stage nasopharyngeal cancer, dental extraction may be needed to remove any broken or infected teeth before radiation therapy. It is important to take out any broken or infected teeth before radiation therapy. Taking out unhealthy teeth after radiation therapy can cause problems with the jaw bone.

• **Diet, nutrition and the role of your dietitian:** Your cancer and its treatment can make it hard to eat and drink. Your doctor will recommend you see a dietitian to maximise your nutrition during treatment as well as while you are recovering. Sometime feeding tubes may be recommended depending on the area being treated and the dose of radiation therapy. There are two common types of feeding tubes:
  
  • **Gastrostomy tube (sometimes called a PEG tube):** This type of tube is inserted through your abdominal wall into your stomach, with part of the tube staying outside the stomach. A syringe can be attached to the tube to give you food this way if needed. The tube is inserted using a camera through the mouth into the stomach (gastroscopy) or using a CT scanner to guide insertion directly through the skin. If a PEG tube is needed, your doctor will organise this before starting your radiation therapy.

  • **Nasogastric tube:** This type of tube goes through the nose down into the stomach and is usually used for short periods (from a few days up to weeks). A nasogastric tube can be inserted at any time (before, during or after treatment).

• **Speech, voice and swallowing:** Your cancer and its treatment can make swallowing and speech difficult. Your doctor will recommend you see a speech pathologist, who can help you with ways to manage swallowing and communication difficulties, during and after treatment. Your speech pathologist will also help with your voice rehabilitation during and after treatment.

### SIDE EFFECTS OF RADIATION THERAPY

The side effects of radiation therapy start around two weeks into treatment and progress through treatment to peak in the last week or just after treatment ends. The side effects start to improve 2–3 weeks after the end of treatment.

**Side effects of radiation therapy depend on:**

• the dose of radiation therapy

• the area being treated

• whether or not chemotherapy is added to the radiation therapy.

Each individual responds to radiation therapy differently. Some people may experience a few side effects while others may not experience any at all. The following are some common side effects of radiation therapy.
Common side effects of radiation therapy include:

- tiredness
- skin irritation in the treated area (e.g. redness, dryness and itching, weeping skin, scaling or sometimes skin breakdown (sores))
- dry mouth and throat due to loss of saliva (called xerostomia)
- changed taste (usually a loss of taste or sometimes an unpleasant taste in the mouth)
- pain on swallowing or difficulty with swallowing
- weight loss.

Most side effects are short term and go away within 4–6 weeks of finishing radiation therapy. Some side effects may last for months after you finish radiation therapy and some may be permanent.

Once your radiation therapy ends, you will have regular follow-up appointments so your cancer care team can check your recovery and monitor any side effects that you may have. About 12 weeks after your last radiation therapy session, your doctor will usually order a PET scan to make sure the cancer has completely gone. If the cancer has not gone away after radiation therapy, or comes back in the future, you may still be able to have surgery to try to remove the cancer.

Your doctor may recommend some specific supportive care options to help you during your treatment and recovery. Further information about supportive care is available on the website.
CHEMOTHERAPY

Chemotherapy works by destroying or damaging cancer cells. For nasopharyngeal cancer, chemotherapy is usually given into a vein through a needle with a cannula (tube) attached.

There are a number of ways that chemotherapy may be used to treat nasopharyngeal cancer, including:

- **Chemotherapy concurrent with radiotherapy:** Sometimes chemotherapy is added to definitive radiation therapy (chemoradiation). It is usually used for advanced stage nasopharyngeal cancers and some stage II cancers. This may be given once every 3 weeks or once a week throughout the duration of radiation therapy. This makes the radiation more effective at killing cancer cells but also leads to more side effects in most people.

- **Neoadjuvant or Adjuvant Chemotherapy:** Chemotherapy is given before (neoadjuvant) or after (adjuvant) definitive chemoradiotherapy. It is used to reduce the risk of the cancer spreading to other parts of the body for patients with advanced stage cancers. Neoadjuvant chemotherapy may also help to shrink the cancer before radiotherapy and make the radiotherapy easier to deliver.

- **Palliative chemotherapy:** This is used when the cancer is incurable. The cancer may be too large or has spread too much to be treated with radiotherapy. Palliative chemotherapy helps to slow the growth of cancer and reduce symptoms. It is important to remember that palliative chemotherapy is not as intense as other types and is much less likely to have significant side effects.

Before you start treatment, your medical oncologist will choose one or more chemotherapy medications that will be best to treat the type of cancer you have.

The chemotherapy medications your doctor chooses may depend on:

- whether the treatment is curative or palliative
- when it is used
- your medical history.

SIDE EFFECTS OF CHEMOTHERAPY

The side effects of chemotherapy depend on the medicines used and the dose. The most common medicines used are called cisplatin, carboplatin, gemcitabine and 5-flurouracil (5-FU).
Each individual responds to chemotherapy differently. Some people may experience a few side effects while others may not experience any at all. The following are some common side effects of chemotherapy for nasopharyngeal cancer.

- a feeling of wanting to vomit (nausea) or vomiting
- poor appetite
- changed taste (usually a loss of taste or sometimes an unpleasant taste in the mouth)
- more side effects of radiation, if you have chemotherapy at the same time as radiation
- fatigue
- kidney damage (caused by some medications)
- hearing loss/ringing in the ears
- hair loss/thinning
- rash
- higher risk of infection (if the chemotherapy reduces the number of white cells in the blood).
- loss of feeling in the fingers and toes

Most side effects are short term and will go away once you finish chemotherapy. Some side effects may be long term and some, such as hearing loss, may be permanent.

Once your treatment ends, you will have regular follow-up appointments so that your doctor can check your recovery, make sure the cancer has not returned and monitor and treat any side effects that you may have.

Your doctor may recommend that you receive supportive care to help during your recovery. Further information about supportive care is available on the website.
SURGERY

Surgery for nasopharyngeal cancer is not common because the area is difficult to get to and it is close to important nerves and blood vessels. Surgery may be needed if the cancer returns after previous treatment with radiation therapy. The type of surgery used in this situation will depend on the size and location of the recurrent cancer.

- **Endoscopic sinus surgery** is where a telescope and surgical instruments are passed through the nose to get to the nasopharynx without external cuts.
- **Maxillary swing approach** is where a cut is made in the upper lip and next to the nose, and the upper jaw is cut to allow the surgeon to get access to the nasopharynx.
- **Neck dissection** is the removal of lymph nodes from the neck. It is used to take out lymph nodes that have not responded to radiation therapy or to treat cancer that has come back after earlier treatment.

HOW CAN I PREPARE FOR SURGERY?

Your doctor will explain details of the surgery, general risks and side-effects of surgery. Ask your doctor if you have questions. They may recommend:

- **stopping blood thinners (e.g. aspirin) before surgery to reduce the risk of bleeding**
- **special stockings to reduce the risk of blood clots**
- **early mobilisation to reduce the risk of blood clots and chest infection**
- **antibiotics to reduce the risk of wound infection.**

If you smoke, it is important that you consider stopping smoking before starting treatment to help reduce the risk of infection and help you recover after your treatment.

SIDE EFFECTS OF SURGERY

Treatment for nasopharyngeal cancer may lead to a number of side effects. You may not experience all of the side effects. Speak with your doctor if you have any questions or concerns about treatment side effects.
FOLLOW-UP CARE

You will need regular check-ups with your cancer care team after treatment for nasopharyngeal cancer. This may include a physical exam and checking the nose and throat with a thin, flexible tube with a light and camera (nasendoscopy).

Some people may also need imaging such as CT, MRI or PET scans during follow-up. Ask your doctors if you need any of these scans. It is important to have follow-up to make sure that if the cancer comes back, it is caught and treated as early as possible. If you have any concerns between appointments, you should contact your doctor.

SUPPORTIVE CARE DURING TREATMENT

It is important to have appropriate supportive care before, during and after treatment for head and neck cancer. Here are some things you should consider before/during treatment.

- You may find it difficult to swallow during and after radiation therapy because it may make your mouth dry and your throat sore. You may notice changes in your taste or you may enjoy your food less. Most people will need to adjust their diet during chemoradiotherapy. Many people will require pain-killing medications during and for a short time after treatment. Radiation therapy may also affect your teeth (e.g. cause tooth decay).

- Chemotherapy may cause changes in how you taste food, give you a feeling of wanting to vomit (nauseous) or vomit. These side effects may also reduce your appetite.
DIE T AND NUTRITION AND ROLE OF YOUR DIETITIAN

It is important for people with head and neck cancer to stay well-nourished and to avoid unplanned weight loss. If you can’t eat or drink enough, you may become dehydrated, malnourished or begin to lose weight. To help you get enough nutrition, you may need a feeding tube for a short period of time.

Having a good diet can help you:

• get through treatment
• reduce the chance you will get an infection
• avoid staying in hospital
• recover more quickly
• keep your strength and energy levels up.

What can I do to keep my food intake up?

• Eat a diet high in protein and calories (energy).
• Change the texture of foods to make it easier to chew and swallow
• Eat small meals or snacks more often if you have trouble eating a full meal.
• Drink calorie-rich fluids such as milk, milkshakes, smoothies or juice. Your dietitian may recommend supplement drinks that are high in protein and calories.
• If you have a sore mouth or throat, avoid foods that scratch or burn such as citrus, vinegar, chips or toast.

Where can I find support?

Your dietitian is an expert in food and nutrition who will help you with your diet. Your dietitian will help you work out a plan to get all the energy you need. They may give you some tips to help make eating and drinking easier and to help you enjoy your food to help you keep weight on.

You may have trouble eating and drinking because of your treatment, but you may find that this gets better over time. Some people need a feeding tube to make sure they are eating enough and getting enough energy. If this is the case for you, your doctor, dietitian and nurse will talk with you about what this involves. Feeding tubes are usually only needed for a short time, until you recover enough and can eat more. Some people may need feeding tubes for a longer period of time.

More information about diet and nutrition is available here.
SPEECH, VOICE AND SWALLOWING, AND THE ROLE OF YOUR SPEECH PATHOLOGIST

Treatment for head and neck cancer may cause changes to parts of your mouth (lips, teeth, tongue, palate) and/or throat (pharynx, larynx), which can affect your ability to speak and/or swallow. These changes may only last for a short time or they may be permanent.

Speech and voice problems can affect your daily life. This may leave you feeling frustrated, distressed or embarrassed, particularly if people have trouble understanding your speech.

If you find it difficult to swallow (known as dysphagia), you may notice:

• you need to swallow many times to clear food from your mouth or throat
• you need to clear your throat or cough while or immediately after eating or drinking
• it hurts to swallow
• your voice sounds gurgly after swallowing.

Make sure to let your doctor or nurses know so that a speech pathologist can test your swallow and give you advice on what to do with food and drinks to make it easier to swallow.

If your treatment has caused changes to your speech, voice or swallowing, you can get help from a speech pathologist. A speech pathologist is an expert in difficulties with swallowing and communication. Your doctor may recommend that you see a speech pathologist before, during and after your treatment.

Your speech pathologist can:

• give you exercises or tips to help your swallow, speech and voice
• help you plan other ways of communicating such as writing or using a computerised voice to speak for you
• show you how to use devices or aids if you need them
• show you safe swallowing tricks such as changing your head position, or changing the thickness of food/liquids to make it easier to swallow them.

You may also get help from a doctor or a dietitian and, in some cases, they may recommend a feeding tube.
TEETH AND MOUTH CARE AND ROLE OF YOUR DENTIST

Treatments for head and neck cancer, especially radiation therapy, can cause side effects that affect your teeth and mouth such as:

- dry mouth
- an increase in ulcers or inflammation in your mouth (mucositis)
- altered taste
- being unable to fully open your mouth (trismus)
- tooth decay
- infected or bleeding gums
- breakdown of tissue or bone in some areas of the mouth.

These side effects may be painful and may make it difficult to eat, talk or swallow. It is important to take care of your teeth and mouth during treatment because infections can be harmful and slow down your treatment. Some side effects can last for a long time after treatment (late effects).

**What can I do to keep my teeth and mouth healthy?**

There are a number of things that you can do to keep your teeth and mouth healthy.

- Drink plenty of water and chew sugar-free chewing gum to keep your mouth moist.
- Regularly mouth wash with a salt and bicarbonate solution or commercial alcohol-free mouth wash
- Gently brush your teeth, gums and tongue with a soft toothbrush after every meal and at bed time.
- Gently floss your teeth every day.
- Use high-strength fluoride toothpaste.

Your dentist is an important member of your healthcare team before, during and after treatment because side effects that affect the teeth and mouth can often be prevented or reduced through regular dental check-ups.

- It is a good idea to have a dental check-up before you start treatment. Your dentist will check the health of your teeth and mouth and will give you a plan to keep your mouth healthy. Sometimes teeth that are decayed and unhealthy need to be removed before radiation therapy to reduce the risk of problems after treatment.
- During your treatment, your dentist will look out for any teeth or mouth side effects.
- After your treatment, you should visit your dentist every 6 months for a check-up because the side effects of radiation therapy on your teeth can be long lasting.
MENTAL HEALTH FOR PEOPLE WITH CANCER

Sometimes this is referred to as psychosocial aspects or survivorship.

Being diagnosed with cancer and having treatment can lead to extra worries or concerns for you and the people caring for you. Depending on the treatment, you may experience any of the following:

- low mood or depression
- anxiety
- disfigurement
- difficulties with eating
- difficulties with speaking
- changes in sexual activity.
- Financial stress

You may have got through the diagnosis and treatment for nasopharyngeal cancer, but you may be finding it difficult to deal with some of the side effects of treatment. Speak with your doctor about any difficulties you may be experiencing. Your doctor may give you a referral to a psychologist or another healthcare professional who can help you. Speak with your family and friends too about any concerns you may have.

You may find it helps to join a patient support group and speak with others who are having treatment for nasopharyngeal cancer. You can also find help and advice in online self-help resources such as beyondblue.
QUESTIONS TO ASK YOUR CANCER CARE TEAM

Being diagnosed with cancer can be overwhelming and confusing. There are a lot of information and treatment decisions to make at a distressing time for you and your family. To help you understand everything and get the information you need to make decisions about your health, consider asking the following questions to your cancer care team:

• Exactly what type of cancer do I have? Where is it located?
• Why did I get this cancer? Is it related to the HPV virus?
• What stage is the cancer? What are the chances of cure with treatment?
• What are my treatment options? Which treatment do you recommend for me and why?
• Have you discussed my case at a Multidisciplinary Team meeting and what were the recommendations?
• Who will be part of the cancer care team, and what does each person do? Should I see another specialist before treatment, such as a radiation oncologist, medical oncologist, plastic surgeon, dentist, dietician or speech pathologist?
• What are the possible side effects of treatment in the short- and long-term? How can they be prevented or managed?
• Will the treatment affect my ability to eat, swallow, or speak? Will I need a feeding tube?
• What will happen if I don't have any treatment?
• How much will the treatment and/or operation cost? Will Medicare or my health insurance cover it?
• What follow-up tests will I need? How often will they be?
• Am I suitable for any clinical trials?
• What lifestyle changes (diet, exercise) do you recommend I make?
• Who can I call if I have any problems or questions?
• Where can I find emotional support for me and my family? Is there a support group or psychologist you can recommend?
• If I wanted to get a second opinion, can you provide all my medical details?
You may want to write specific questions here to ask your doctor or cancer care team

About Head and Neck Cancer Australia

Head and Neck Cancer Australia (formerly Beyond Five) is Australia’s only charity dedicated to providing information and support to people living with head and neck cancer, caregivers, family and healthcare professionals.

Head and Neck Cancer Australia’s mission is to improve the quality of life of everyone affected by head and neck cancer through education and access to support and to raise awareness of head and neck cancer nationally.

Head and Neck Cancer Australia supports people through their cancer journey, from diagnosis to treatment and life after cancer by providing comprehensive, easy to understand and easy to access information. We have the only Directory of Head and Neck Cancer services and support groups available in Australia and New Zealand helping people to find the right services and support when they need it most.

Phone: 1300 424 848
Email: contact@headandneckcancer.org.au
Web: www.headandneckcancer.org.au

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